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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,277	04/01/2004	Swei Mu Wang	MR3411-12	2280
4586 7590 07/12/2007 ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			EXAMINER MUSSEY, BARBARA J	
			ART UNIT 1733	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/817,277

Applicant(s)

WANG, SWEI MU

Examiner

Barbara J. Musser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 6-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 10, it is unclear what is meant by "limiting the carrying roller to move within a rotational moving stroke of 89 degrees" particularly since the specification describes limiting to 89 degrees to the lamination roll, not the carrying roll. (Pg. 6, ll. 9-11; Figure 2). For the purposes of examination, this is considered to require that the extruded material contact the laminating roller for a maximum of 89 degrees as described in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaines et al. (U.S. Patent 3,058,863) in view of Anderson et al. (U.S. Patent 3,075,864), Irion et al., and Roys et al. (U.S. Patent 6,284,183)

Gaines et al. discloses a method of bonding a textile carrier to a polymer by applying the fabric(9) to a carrying roller(11), extruding a polymer(4) downwardly onto

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the fabric at a nip between a cooled lamination roller(10) and the carrying roller, and compressing the polymer and fabric together, wherein the fabric is not completely penetrated by the polymer.(Figure 2) The reference does not disclose extruding the polymer onto the surface of the lamination roller prior to contacting the fabric at the nip. Anderson et al. discloses extruding a polyethylene film onto a chill roll to partially set the polymer before bringing it into contact with a second web.(Col. 3, ll. 52-57; Figure 3) It would have been obvious to one of ordinary skill in the art at the time the invention was made to extrude the polyethylene film of Gaines et al. onto the chilled lamination roll prior to contact with the fabric since this would allow modification of the amount of adhesion(bleed-through) of the polymer to the fabric.(Col. 3, ll. 52-57) Since the lamination roll is water-cooled, one in the art would understand there would be a passage in the roller for the fluid.

The references cited above do not disclose the laminate is artificial leather. Irion et al. discloses making a laminate of polyethylene and fabric similar to that of Gaines using a similar method, and indicates it can be used to form artificial leather.(Col. 1, ll. 58) It would have been obvious to one of ordinary skill in the art at the time the invention was made to artificial leather using the method of Gaines et al. and Anderson et al. since Irion et al. discloses that a similar process using similar materials can be used to form artificial leather.(Col. 1, ll. 58; Figure 1)

The references cite above do not disclose adjusting an angular position of the carrying roll relative to the lamination roll. Roys et al. discloses moving a carrying roll relative to a laminating roll dependent on the thickness of the extruded film to maintain

the desired laminating temperatures.(Col. 7, ll. 39-46) It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the carrying roll adjustable relative to the laminating roll to maintain the desired lamination temperatures and to adjust for varying film thicknesses.(Col. 7, ll. 39-46)

Regarding claim 10, Anderson et al. shows a lamination distance of less than 89 degrees(Figure 3).

Regarding claim 11, polyethylene is a thermoplastic.(title)

Regarding claims 12-15, while this reference is directed to bonding polyethylene films to fabric, one in the art would appreciate that the same process could also be used to bond other polymers used in the making of artificial leather to fabric such as mixtures of thermoplastic urethane with other materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the polyethylene of Irion et al. with other materials know to be used to make artificial leather since one in the art would appreciate that this method could be used to make other types of artificial leather based on other polymers.

4. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaines et al., Anderson et al. Irion et al., and Roys et al. as applied to claim 1 above, and further in view of Stahle et al.(U.S. Patent 5,187,005).

The references cited above do not disclose moving the extruder relative to the laminating roller. Stahle et al. discloses moving an extruder in three directions relative to a roll nip to adjust the position at which the film contacts the web it is being bonded to.(Col. 16, ll. 54-66) It would have been obvious to one of ordinary skill in the art at the

time the invention was made to move the extruder relative to the laminating roller in the process of Gaines et al., Anderson et al., Irion et al., and Roys et al. since Stahle et al. shows this adjustment in known in general in the extrusion coating arts.(Col. 16, ll. 54-66)

Regarding claim 6, since the extruder can be moved in all three directions, the extruder effectively changes its angular position relative to the lamination roller.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaines et al., Anderson et al., Irion et al., and Roys et al. as applied to claim 1 above, and further in view of Klosiewicz(U.S. Patent 6,432,496).

The references cited above do not disclose changing the speed of the lamination roller. Klosiewicz discloses it is known in general in the extruding arts to change the speed of a laminating roller to change the thickness of the extruded film.(Col. 10, ll. 63-66) It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the speed of the laminating roll to vary the thickness of the extruded film since such is known in the extruding arts as taught by Klosiewicz.(Col. 10, ll. 63-66)

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaines et al., Anderson et al., Irion et al., and Roys et al., as applied to claim 1 above, and further in view of Wevers et al.(U.S. Publication 2005/0106965A1).

The references cited above do not disclose the polymer containing a foaming agent. Wevers et al. discloses making artificial leather(Abstract) wherein one of the layers is made by foaming a polymer as it is extruded.[0074] It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a

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foaming agent into the polymer of Gaines et al., Anderson et al., and Irion et al. since Wevers et al. discloses such is known and since foaming the polymer would make the leather porous, which would improve its suitability for leather since leather is microporous.

Regarding claim 9, a layer than it is foamed is often porous. Additionally, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the polymer porous since it is well-known in the leather arts that leather is porous and therefore the artificial leather would more closely resemble real leather.

Response to Arguments

7. Applicant's arguments filed 4/13/07 have been fully considered but they are not persuasive.

Regarding applicant's argument that the references do not teach changing the angle of the carrying roll relative to the laminating roll, Roys et al. does.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara J. Musser whose telephone number is (571) 272-1222. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

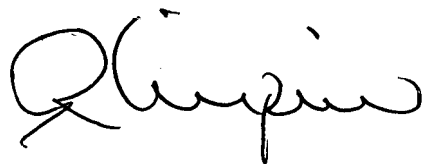
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571)-272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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